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January 31, 2013

Dear MIT Chancellor,

I am an intern for Professor Tsai and have been helping her with her research for quite a while now, as I believe she is working on a potentially world-changing project. It has come to my attention that the research she is doing regarding Alzheimer's Disease is soon going to stop receiving funding. This is a decision that must have been based off of careful thought and consideration on your part, however I believe that it is the wrong decision to make. Alzheimer's Disease is a condition that widely affects men and women as they approach old age, usually setting in around age 65 or older. 5-10% of people who reach and exceed this age have Alzheimer's, representing a very large population of the world affected by this mind-altering disease. You and I have around a 7% chance of getting this disease, Chancellor, if the lack of treatment available remains the same. The effects of Alzheimer's disease include short term memory loss, confusion, delusions, personality changes, long-term memory loss and inhibition of spatial awareness leading to getting lost or not recognizing a familiar place. These symptoms obviously have life-changing impacts on the victims of Alzheimer's, who become lost in their own minds behind hallucinations and personality changes that they can't control.



If you were not already aware, MIT has made some fantastic contributions to Alzheimer's research. In 2007, Professor Tsai, a researcher at MIT, used mice to experiment with possible treatments for the disease, and was able to target one specific gene that she believes to be the

leading cause behind the disease. The HDAC2 gene has been identified as the most probable to be linked to Alzheimer's disease out of a group of 11 enzymes that make up the HDAC family. HDAC inhibitors are currently in the process of being tried on mice with Alzheimer's-like symptoms, and has shown significant progress. Mice who have been given the inhibitors have been able to regain their memory and learning ability, and mice who have been engineered to not produce any HDAC2 at all seem to have improved memory function as well. Tsai has also developed the hypothesis that an excess of the protein regulator p25 is involved in Alzheimer's by examining the amount of this protein



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in the brain's of Alzheimer's patients after they have already passed away compared to that of people without the disease. This research is all promising in the search for a cure for Alzheimer's, and is right at the brink of being able to be used on humans. As the researchers predicted, two to four years from now HDCA inhibitors may be used not only for Alzheimer's but also for other conditions such as cancer and Huntington's disease.

As you can see, Alzheimer's is so close to being a resolved issue that people will no longer have to worry about for themselves or their loved ones. Professor Tsai has dedicated a large portion of her life to this research, and myself along with her other interns would happily continue to help her finalize and perfect her research. Shutting down the funding for these experiments would be destructive to not only the MIT community and its researchers, but to the entire world who are waiting for this research to emerge. We cannot have brilliant minds be restricted simply because they are older than 60 years old and are more susceptible to a disease that could potentially be cured within the next few years. I believe, and I speak for Professor Tsai as well, that with a small amount of funding and continued support of our pursuit of a cure, that Alzheimer's will very soon become a thing of the past.

Sincerely yours,

Jamison Fletcher

Works Cited: 2004. Photograph. *Two Guys One Movie*. By Jim MacMain. Blogger, 11 July 2011. Web. 31 Jan. 2013. <<http://www.2guys1movie.com/2011/07/poll-position-notebook-2004.html>>.